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 <151> 1999-01-27

<150> 60/144,783  
 <151> 1999-07-20

<150> 60/156,094  
 <151> 1999-09-24

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<170> Microsoft Office 97

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 <211> 1756  
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 <211> 521  
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 <213> Glycine max

<400> 2  
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 His Leu Arg Pro Thr Pro Ser Ala Lys Ser Lys Ala Leu Arg His Leu  
 20 25 30  
 Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu  
 35 40 45  
 His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser  
 50 55 60  
 Lys Lys His Gly Pro Leu Phe Ser Leu Ser Phe Gly Ser Met Pro Thr  
 65 70 75 80  
 Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His  
 85 90 95  
 Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg  
 100 105 110  
 Leu Thr Tyr Asp Asn Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp  
 115 120 125  
 Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr  
 130 135 140  
 Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe Leu  
 145 150 155 160  
 Arg Val Met Ala Gln Ser Ala Glu Ala Gln Lys Pro Leu Asp Val Thr  
 165 170 175  
 Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu  
 180 185 190  
 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile  
 195 200 205  
 Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys Tyr Leu  
 210 215 220  
 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe  
 225 230 235 240  
 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg  
 245 250 255  
 Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Ala Ser Gly Val Phe  
 260 265 270  
 Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu Ile Lys  
 275 280 285  
 Ile Thr Lys Glu Gln Ile Lys Gly Leu Val Val Asp Phe Phe Ser Ala  
 290 295 300  
 Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu Leu  
 305 310 315 320  
 Ile Asn Asn Pro Arg Val Leu Gln Lys Ala Arg Glu Glu Val Tyr Ser  
 325 330 335  
 Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu  
 340 345 350

Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro  
 355 360 365

Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly  
 370 375 380

Tyr Val Ile Pro Glu Gly Ala Leu Val Leu Phe Asn Val Trp Gln Val  
 385 390 395 400

Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu  
 405 410 415

Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Gly Pro Leu Asp Leu  
 420 425 430

Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met  
 435 440 445

Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala  
 450 455 460

Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln  
 465 470 475 480

Ile Leu Lys Gly Asp Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly  
 485 490 495

Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg  
 500 505 510

Ile Gly Val Ala Ser Lys Leu Leu Ser  
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<210> 3

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Oligonucleotide

<400> 3

cgggatccat gcaaccggaa accgtcg

27

<210> 4

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Oligonucleotide

<400> 4

ccggaattct caccaaacat cacggaggtt tc

32

<210> 5

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Oligonucleotide

<400> 5

tcaaggagaa aaaaccggg atccatgttg ctggaacttg cacttgg

47

<210> 6  
<211> 35  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Oligonucleotide

<400> 6  
ggccagtgaa ttgtataacg actcactata gggcg

35

<210> 7  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 7  
aaaatttagcc tcacaaaagc aaag

24

<210> 8  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:PCR primer

<400> 8  
atataaggat tgatagtttta tagtagg

27

<210> 9  
<211> 1824  
<212> DNA  
<213> Glycine max

<400> 9  
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ccttcggacc ttacttggaaat ttcgtgagga agctcatcat gaacgaccc cccaaacgcca 480  
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 ggtctcggttc atctactttt tatgaagtat ataagccctt ccatgcacat tgtatcatct 1740  
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 actataaact atcaatcctt atat 1824

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 <211> 521  
 <212> PRT  
 <213> Glycine max

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 20 25 30

Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu  
 35 40 45

His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser  
 50 55 60

Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met Pro Thr  
 65 70 75 80

Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His  
 85 90 95

Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg  
 100 105 110

Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp  
 115 120 125

Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Pro Asn Ala Thr Thr  
 130 135 140

Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Thr Arg Lys Phe Leu  
 145 150 155 160

Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp Leu Thr  
 165 170 175

Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu  
 180 185 190

Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile  
 195 200 205

Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys His Leu  
 210 215 220

Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe  
 225 230 235 240

Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg  
 245 250 255

Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly Val Phe  
 260 265 270

Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu Ile Lys  
 275 280 285

Ile Thr Lys Asp His Ile Glu Gly Leu Val Val Asp Phe Phe Ser Ala  
 290 295 300

Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu Leu  
 305 310 315 320

Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val Tyr Ser  
 325 330 335

Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu  
 340 345 350

Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro  
 355 360 365

Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly  
 370 375 380

Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp Gln Val  
 385 390 395 400

Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu  
 405 410 415

Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Gly Pro Leu Asp Leu  
 420 425 430

Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met  
 435 440 445

Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala  
 450 455 460

Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln  
 465 470 475 480

Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly  
 485 490 495

Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg  
 500 505 510

Ile Gly Val Ala Ser Lys Leu Leu Ser  
 515 520

<210> 11  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:PCR primer

<400> 11  
 atgttgctgg aacttgcact t

21

<210> 12  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:PCR primer

<400> 12  
 ttaagaaaagg agtttagatg caacg

25

<210> 13  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:PCR primer

<400> 13  
 tgtttctgca cttgcgtccc ac

22

<210> 14  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:PCR primer

<400> 14  
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22

<210> 15  
 <211> 1501  
 <212> DNA  
 <213> *Medicago sativa*

<400> 15  
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 aacttctcca ctatgcactc atcgatctct ccaaaaagca tggcccttcaag ttctctct 180  
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 aggctgagga gatcagagac atcgctcgcg aggttcttaa gatcttcggc gaatacagcc 600  
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 atgacatctt gaacaagttc gaccctgtcg ttgaaagggt catcaagaag cgccgtggga 720  
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<210> 16  
 <211> 499  
 <212> PRT  
 <213> *Medicago sativa*

<400> 16  
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His Leu Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly  
 20 25 30

His Leu His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp  
 35 40 45

Leu Ser Lys Lys His Gly Pro Leu Phe Ser Leu Ser Phe Gly Ser Met  
 50 55 60

Pro Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln  
 65 70 75 80

Thr His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Thr  
 85 90 95

Arg Arg Leu Thr Tyr Asp Asn Ser Val Ala Met Val Pro Phe Gly Pro  
 100 105 110

Tyr Trp Arg Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala  
 115 120 125

Thr Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys  
 130 135 140

Phe Leu Arg Val Met Ala Gln Ser Ala Glu Ala Gln Lys Pro Leu Asp  
 145 150 155 160

Val Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met  
 165 170 175

Met Leu Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu  
 180 185 190

Lys Ile Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys  
 195 200 205

Tyr Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn  
 210 215 220

Lys Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Gly Ile  
 225 230 235 240

Val Arg Arg Arg Glu Asn Gly Glu Val Val Glu Gly Glu Ala Ser Gly  
 245 250 255

Val Phe Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu  
 260 265 270

Ile Lys Ile Thr Lys Glu Gln Ile Lys Gly Leu Val Val Asp Leu Phe  
 275 280 285

Ser Ala Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala  
 290 295 300

Glu Leu Ile Asn Asn Pro Arg Val Leu Gln Lys Ala Arg Glu Glu Val  
 305 310 315 320

Tyr Ser Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln  
 325 330 335

Asn Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His  
 340 345 350

Pro Pro Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile  
 355 360 365

Asn Gly Tyr Val Ile Pro Glu Gly Ala Leu Val Leu Phe Asn Val Trp  
 370 375 380

Gln Val Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg  
 385 390 395 400

Pro Glu Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Gly Pro Leu  
 405 410 415

Asp Leu Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg  
 420 425 430

Arg Met Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu  
 435 440 445

Leu Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln  
 450 455 460

Gly Gln Ile Leu Lys Gly Asp Asp Ala Lys Val Ser Met Glu Glu Arg  
 465 470 475 480

Ala Gly Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu  
 485 490 495

Ala Arg Ile

<210> 17

<211> 1501

<212> DNA

<213> Vicia villosa

<400> 17

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aacttctcca	ctacgcactc	atcgacctct	ccaaaaaaca	tggtccctta	ttctctctct	180
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<210> 18

<211> 499

<212> PRT

<213> Vicia villosa

<400> 18  
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 His Leu Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly  
 20 25 30  
 His Leu His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp  
 35 40 45  
 Leu Ser Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met  
 50 55 60  
 Pro Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln  
 65 70 75 80  
 Thr His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile  
 85 90 95  
 Arg Arg Leu Thr Tyr Asp Ser Leu Val Ala Met Val Pro Phe Gly Pro  
 100 105 110  
 Tyr Trp Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala  
 115 120 125  
 Thr Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys  
 130 135 140  
 Phe Leu Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp  
 145 150 155 160  
 Leu Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met  
 165 170 175  
 Met Leu Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu  
 180 185 190  
 Lys Ile Tyr Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys  
 195 200 205  
 His Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn  
 210 215 220  
 Lys Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile  
 225 230 235 240  
 Val Arg Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly  
 245 250 255  
 Val Phe Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Thr Glu  
 260 265 270  
 Ile Lys Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe  
 275 280 285  
 Ser Ala Gly Ile Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala  
 290 295 300  
 Glu Leu Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val  
 305 310 315 320  
 Tyr Ser Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln  
 325 330 335  
 Asn Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His  
 340 345 350

Pro Pro Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile  
 355 360 365  
 Asn Gly Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp  
 370 375 380  
 Gln Val Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg  
 385 390 395 400  
 Pro Glu Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Pro Leu  
 405 410 415  
 Asp Leu Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg  
 420 425 430  
 Gly Met Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu  
 435 440 445  
 Leu Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln  
 450 455 460  
 Gly Gln Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg  
 465 470 475 480  
 Ala Gly Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu  
 485 490 495  
 Ala Arg Ile

<210> 19  
 <211> 1501  
 <212> DNA  
 <213> Lens culinaris

<400> 19  
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 acccacaag cccaaagcct cgtctccct tcataaggaca ccctcatctc taaaagaca 120  
 aacttctcca ctacgcaactc atcgacactt ccaaaaaaca tggtccctta ttctccctct 180  
 actttggctc catgccaacc gttgttgccct ccacaccaga attgttcaag ctttccctcc 240  
 aaacgcacga ggcaacttcc ttcaacacaaa gttccaaac ctcagccata agacgcctca 300  
 cctatgatag ctcagttggcc atggttccat tcggacctt ctggaaagttc gtgaggaagc 360  
 tcatcatgaa cgaccttctc aacgcccacca ccgtcaacaa gctcaggcct ttgaggaccc 420  
 aacagatccg caagttccctt agggttatgg cccaaagcgc agaggccag aagcccttg 480  
 acgtcaccga ggagcttctc aaatggacca acagacccat ctccatgatg atgctcggcg 540  
 aggctgagga gatcagagac atcgctcgcg aggttcttaa gatcttcggc gaatacagcc 600  
 tcactgactt catctggctt ttgaaatgtc tcaaggttgg aaagtatgag aagaggattg 660  
 atgacatctt gaacaagttc gaccctgtcg ttgaaagggtt catcaagaag cgccgtgaga 720  
 tcgtcagaag gagaaagaac ggagaagttt ttgaggccga ggccagccgc gtcttcctcg 780  
 acactttgct tgaattcgct gaggacgaga ccatggagat caaaattacc aaggagcaaa 840  
 tcaaggccct ttgtgtcgac tttttctctg cagggacaga ttccacagcg gtggcaacag 900  
 agtgggcatt ggcagagctc atcaacaatc ccaggggtttt gcaaaaggct cgtgaggagg 960  
 tctacagtgt tgtggcaaa gataactcg ttgacgaagt tgacactcaa aacttccctt 1020  
 acattaggc cattgtgaag gagacattcc gaatgcaccc accactccca gtggtcaaaa 1080  
 gaaagtgcac agaagagtgt gagattaatg ggcatgtat cccagagggc gcattgggtc 1140  
 tttcaatgt ttggcaagta ggaaggggacc ccaaataactg ggacagacca tcagaattcc 1200  
 gtcccgagag gttcttagaa actgggtctg aaggggaagc agggcctctt gatcttaggg 1260  
 gccagcattt ccaactccctc ccattgggtt ctgggaggag aatgtgcctt ggtgtcaatt 1320  
 tggctacttc aggaatggca acacttctt catctctt ccaatgcttt gacctgcaag 1380  
 tgctgggccc tcaaggacaa atattgaaag gtgatgatgc caaagttgc atgaaagaga 1440  
 gagctggcct cacagttcca agggcacata gtctcggtt gttccactt gcaaggatcg 1500  
 g

<210> 20  
 <211> 499

<212> PRT  
 <213> *Lens culinaris*

<400> 20  
 Phe Leu His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg  
 1 5 10 15  
 His Leu Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly  
 20 25 30  
 His Pro His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp  
 35 40 45  
 Leu Ser Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met  
 50 55 60  
 Pro Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln  
 65 70 75 80  
 Thr His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile  
 85 90 95  
 Arg Arg Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro  
 100 105 110  
 Tyr Trp Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala  
 115 120 125  
 Thr Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys  
 130 135 140  
 Phe Leu Arg Val Met Ala Gln Ser Ala Glu Ala Gln Lys Pro Leu Asp  
 145 150 155 160  
 Val Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met  
 165 170 175  
 Met Leu Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu  
 180 185 190  
 Lys Ile Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys  
 195 200 205  
 Tyr Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn  
 210 215 220  
 Lys Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile  
 225 230 235 240  
 Val Arg Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Ala Ser Gly  
 245 250 255  
 Val Phe Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu  
 260 265 270  
 Ile Lys Ile Thr Lys Glu Gln Ile Lys Gly Leu Val Val Asp Phe Phe  
 275 280 285  
 Ser Ala Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala  
 290 295 300  
 Glu Leu Ile Asn Asn Pro Arg Val Leu Gln Lys Ala Arg Glu Glu Val  
 305 310 315 320  
 Tyr Ser Val Val Gly Lys Asp Ile Leu Val Asp Glu Val Asp Thr Gln  
 325 330 335

Asn Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His  
 340 345 350

Pro Pro Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile  
 355 360 365

Asn Gly His Val Ile Pro Glu Gly Ala Leu Val Leu Phe Asn Val Trp  
 370 375 380

Gln Val Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg  
 385 390 395 400

Pro Glu Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Gly Pro Leu  
 405 410 415

Asp Leu Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg  
 420 425 430

Arg Met Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu  
 435 440 445

Leu Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln  
 450 455 460

Gly Gln Ile Leu Lys Gly Asp Asp Ala Lys Val Ser Met Glu Glu Arg  
 465 470 475 480

Ala Gly Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu  
 485 490 495

Ala Arg Ile

<210> 21

<211> 1501

<212> DNA

<213> *Lens culinaris*

<400> 21

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accaccaag	cccaaaggct	cgtcttccct	tcataggaca	ccttcatctc	ttaaaagaca	120
aacctctca	ctacgcactc	atcgacctct	ccaaaaaaaca	ttgtccctta	ttctctctct	180
actttggctc	catgccaacc	gttggtcct	ccacaccaga	attgttcaag	ctcttcctcc	240
aaacgcacga	ggcaacttcc	ttaaacacaa	ggttccaaac	ctcagccata	agacgcctca	300
cctatgatag	ctcagttggcc	atggttccct	tccgacccctt	ctggaaagtct	gtgaggaagc	360
tcatcatgaa	cgaccttctc	aacgccacca	ctgttaacaa	gttgaggcct	ttgaggaccc	420
aacagatccg	caagttccctt	agggttatgg	cccaaggcgc	agaggcacag	aagccccttg	480
acttgaccga	ggagcttctg	aatggacca	acagcaccat	ctccatgatg	gtgctcggcg	540
aggctgagga	gatcagagac	atcgctcgcg	aggttcttaa	gatctttggc	gaatacagcc	600
tcactgactt	catctggcca	ttgaagcattc	tcaaggttgg	aaagtatgag	aagaggatcg	660
acgacatctt	gaacaagttc	gaccctgtcg	ttgaaagagt	catcaagaag	cgcctgtaga	720
tcgtgaggag	gagaaagaac	ggagagggtt	ttgagggtga	gttcagcggg	gtttccttg	780
acatcttgc	tgaattcgct	gaggatgaga	ccatggagat	caaatacacc	aaggaccaca	840
tcaagggtct	tgttgcgac	tttttctcg	caggaacaga	ctccacagcgc	gtggcaacag	900
agtgggcatt	ggcagaatgc	atcaacaatc	ctaagggttt	ggaaaaggt	cgtgaggagg	960
tctacagtgt	tgtggaaaag	gacagacttg	tggacaagt	tgacactcaa	aactttcctt	1020
acattagagc	aatcgtgaag	gagacattcc	gcatgcaccc	gccactccca	gtggtcaaaa	1080
gaaagtgcac	agaagagtgt	gagattaatg	gatgtgtgac	cccagaggg	gcattgattc	1140
tcttcaatgt	atggcaagta	ggaagagacc	ccaaatactg	ggacagacca	tcggagttcc	1200
gtcctgagag	gttccttagag	acaggggctg	aaggggaagc	aaggccttt	gatcttaggg	1260
gacgacattt	tcaacttctc	ccatttgggt	ctgggaggag	aatgtccct	ggagtcaatc	1320
tggctacttc	gggaatggca	acacttcttg	catctttat	tcaagtgcctt	gacttgcagg	1380
tgctgggtcc	acaaggacag	atattgaagg	gtggtgacgc	caaagttagc	atggaagaga	1440
gagccggct	cactgttcca	agggcacata	gtcttgcctg	tgttccactt	gcaaggatcg	1500
	g					1501

<210> 22  
 <211> 499  
 <212> PRT  
 <213> *Lens culinaris*

<400> 22  
 Phe Leu His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg  
 1 5 10 15  
 His Leu Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly  
 20 25 30  
 His Leu His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp  
 35 40 45  
 Leu Ser Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met  
 50 55 60  
 Pro Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln  
 65 70 75 80  
 Thr His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile  
 85 90 95  
 Arg Arg Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro  
 100 105 110  
 Tyr Trp Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala  
 115 120 125  
 Thr Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys  
 130 135 140  
 Phe Leu Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp  
 145 150 155 160  
 Leu Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met  
 165 170 175  
 Val Leu Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu  
 180 185 190  
 Lys Ile Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys  
 195 200 205  
 His Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn  
 210 215 220  
 Lys Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile  
 225 230 235 240  
 Val Arg Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly  
 245 250 255  
 Val Phe Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu  
 260 265 270  
 Ile Lys Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe  
 275 280 285  
 Ser Ala Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala  
 290 295 300  
 Glu Leu Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val  
 305 310 315 320

Tyr Ser Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln  
 325 330 335

Asn Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His  
 340 345 350

Pro Pro Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile  
 355 360 365

Asn Gly Cys Val Thr Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp  
 370 375 380

Gln Val Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg  
 385 390 395 400

Pro Glu Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Pro Leu  
 405 410 415

Asp Leu Arg Gly Arg His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg  
 420 425 430

Arg Met Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu  
 435 440 445

Leu Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln  
 450 455 460

Gly Gln Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg  
 465 470 475 480

Ala Gly Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu  
 485 490 495

Ala Arg Ile

<210> 23

<211> 1566

<212> DNA

<213> Phaseolus aureus

<400> 23

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 actcccactg caaaatcaa agcacttcgc catctccaa acccaccaag cccaaaggct 120  
 cgtcttccct tcataggaca ccttcatctc ttaaaagaca aacttctcca ctacgcactc 180  
 atcgacctct ccaaaaaaca tggtccctta ttctctctt actttggctc catgccaacc 240  
 gttgttgccct ccacaccaga attgttcaag ctcttcctcc aaacgcacga ggcaacttcc 300  
 ttcaacacaa gttccaaac ctcagccata agacgcctca cctatgatag ctcagtgcc 360  
 atggttccct tcggaccta ctggaaagttc gtgaggaagc tcatcatgaa cgaccttctc 420  
 aacgcacca ctgtaaacaa gttgagggctt ttgaggaccc aacagatccg caagttcctt 480  
 agggttatgg cccaaaggcgc agaggcacag aagcccttg acttgaccga ggagcttctg 540  
 aaatggacca acagcaccat ctccatgatg atgctcgccg aggctgagga gatcagagac 600  
 atcgctcgcg aggttcttaa gatctttggc gaatacagcc tcactgactt catctggcca 660  
 ttgaaggcatc tcaagggttgg aaagtatgag aagaggatcg acgacatctt gaacaagttc 720  
 gaccctgtcg ttgaaagagt catcaagaag cggcggtgaga tcgtgaggag gagaagaagac 780  
 ggagagggtt ttgagggtga ggtcagcggg gttttccctt acatcttgc tgaattcgct 840  
 gagatgaga ccatggagat caaaatcacc aaggaccaca tcaagggtct tgggtcgac 900  
 ttttctcggt caggaacaga cttccacagcc gtggcaacag agtggggcatt ggcagaactc 960  
 atcaacaatc ctaagggtttt gaaaaaggct cgtgaggagg cttacagtgt tggggaaag 1020  
 gacagacttg tggacgaagt tgacactcaa aaccttcctt acatttagagc aatcgtaag 1080  
 gagacattcc gcatgcaccc gccactccca gtggtaaaaa gaaagtgcac agaagagtgt 1140  
 gagattaatg gatatgtat cccagaggga gcattgattc tcttcaatgt atggcaagta 1200  
 ggaagagacc ccaaatactg ggacagacca tcggagttcc gtcctgagag gttcttagag 1260  
 acaggggctg aaggggaaagc aaggcctt gatcttaggg gacaacattt tcaacttctc 1320  
 ccatttgggtt ctgggaggag aatgtgccct ggagtcaatc tggctacttc gggatggca 1380

acacttctcg catctttat tcagtgcctt gacttgcaag tgctgggtcc acaaggacag 1440  
 atattgaagg gtggtagcgc caaagttgc atgaaagaga gagccggcct cactgttcca 1500  
 agggcacata gtcttgtctg tggtccactt gcaaggatcg gcgttgcac taaactcctt 1560  
 tctaaa 1566

<210> 24  
 <211> 522  
 <212> PRT  
 <213> Phaseolus aureus

<400> 24  
 Met Leu Leu Glu Leu Ala Leu Gly Leu Leu Val Leu Ala Leu Phe Leu  
 1 5 10 15  
 His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg His Leu  
 20 25 30  
 Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu  
 35 40 45  
 His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser  
 50 55 60  
 Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met Pro Thr  
 65 70 75 80  
 Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His  
 85 90 95  
 Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg  
 100 105 110  
 Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp  
 115 120 125  
 Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr  
 130 135 140  
 Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe Leu  
 145 150 155 160  
 Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp Leu Thr  
 165 170 175  
 Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu  
 180 185 190  
 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile  
 195 200 205  
 Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys His Leu  
 210 215 220  
 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe  
 225 230 235 240  
 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg  
 245 250 255  
 Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly Val Phe  
 260 265 270  
 Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu Ile Lys  
 275 280 285

Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe Ser Ala  
 290 295 300

Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu Leu  
 305 310 315 320

Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Ala Tyr Ser  
 325 330 335

Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu  
 340 345 350

Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro  
 355 360 365

Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly  
 370 375 380

Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp Gln Val  
 385 390 395 400

Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu  
 405 410 415

Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Pro Leu Asp Leu  
 420 425 430

Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met  
 435 440 445

Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala  
 450 455 460

Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln  
 465 470 475 480

Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly  
 485 490 495

Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg  
 500 505 510

Ile Gly Val Ala Ser Lys Leu Leu Ser Lys  
 515 520

<210> 25  
 <211> 1566  
 <212> DNA  
 <213> Phaseolus aureus

<400> 25

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 cgtcttccct tcataaggaca cttcatctc ttaaaagaca aacttctcca ctacgcgctc 180  
 atcgacctct ccaaaaaaca tggtccctta ttctctctt actttggctc catgccaacc 240  
 gttgttgcct ccacaccaga attgttcaag ctcttccctt aaacgcacga ggcaacttcc 300  
 ttcaacacaa ggttccaaac ctcagccata agacgctca cctatgatag ctcagtggcc 360  
 atggtccct tcggaccta ctggaaagtcc tggaggaage tcatacatgaa cgaccctctc 420  
 aacgcccacca ctgtaaacaa gttggggctt ttgaggaccc aacagatccg caagttcctt 480  
 aggctatgg cccaaaggcgc agaggcacag aagcccttg acttgaccga ggagcttctg 540  
 aatggacca acagcaccat ctccatgatg atgctcgccg aggctgagga gatcagagac 600  
 atcgctcgcg aggttcttaa gatctttggc gaatacagcc tcactgactt catctggcca 660  
 ttgaagcatc tcaaggttgg aaagtatgag aagaggatcg acgacatctt gaacaagttc 720  
 gaccctgtcg ttgaaagagt catcaagaag cggcggtgaga tcgtgaggag gagaagaac 780  
 ggagaggttg ttgagggtga ggtcagcggg gtttccctt acactttgtc tgaattcgct 840  
 gaggatgaga ccatggagat caaaatcacc aaggaccaca tcaagggtct tgggtcgac 900

tttttctcg caggaacaga ctccacagcg gtggcaacag agtgggcatt ggcagaactc 960  
 atcaacaatc ctaagggttt gaaaaaggct cgtgaggagg tctacagtgt tggggaaag 1020  
 gacagacttg tggacgaagt tgacactcaa aacccctcctt acattagagc aatcgtaag 1080  
 gagacattcc gcatgcaccc gccactccca gtggtcaaaa gaaagtgcac ggaagagtgt 1140  
 gagattaatg gatatgtat cccagagggc gcattgattc tcttcaatgt atggcaagta 1200  
 ggaagagacc ccaaatactg ggacagacca tcggagtcc gtcctgagag gttcctagag 1260  
 acaggggctg aaggggaaagc aaggccttt gatcttaggg gacaacattt tcaacttctc 1320  
 ccatttgggt ctgggaggag aatgtgccct ggagtcaatc tggctacttc gggaaatggca 1380  
 acacttcttg catctttat tcaagtgcctt gacttgcaag tgctgggtcc acaaggacag 1440  
 atattgaagg gtggtgacgc caaagttagc atgaaagaga gagccggcct cactgttcca 1500  
 agggcacata gtcttgtctg tgttccactt gcaaggatcg gcgttgcattc taaactcctt 1560  
 tcttaa 1566

<210> 26  
 <211> 521  
 <212> PRT  
 <213> Phaseolus aureus

<400> 26  
 Met Leu Leu Glu Leu Ala Leu Gly Leu Leu Val Leu Ala Leu Phe Leu  
 1 5 10 15  
 His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg His Leu  
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 Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu  
 35 40 45  
 His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser  
 50 55 60  
 Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met Pro Thr  
 65 70 75 80  
 Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His  
 85 90 95  
 Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg  
 100 105 110  
 Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp  
 115 120 125  
 Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr  
 130 135 140  
 Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe Leu  
 145 150 155 160  
 Arg Ala Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp Leu Thr  
 165 170 175  
 Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu  
 180 185 190  
 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile  
 195 200 205  
 Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys His Leu  
 210 215 220  
 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe  
 225 230 235 240  
 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg  
 245 250 255

Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly Val Phe  
260 265 270

Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu Ile Lys  
275 280 285

Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe Ser Ala  
290 295 300

Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu Leu  
305 310 315 320

Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val Tyr Ser  
325 330 335

Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu  
340 345 350

Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro  
355 360 365

Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly  
370 375 380

Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp Gln Val  
385 390 395 400

Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu  
405 410 415

Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Pro Leu Asp Leu  
420 425 430

Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met  
435 440 445

Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala  
450 455 460

Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln  
465 470 475 480

Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly  
485 490 495

Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg  
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Ile Gly Val Ala Ser Lys Leu Leu Ser  
515 520

<210> 27

<211> 1566

<212> DNA

<213> Phaseolus aureus

<400> 27

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atcgacacct ccaaaaaaca tggccctta ttctctctt actttggctc catgccaacc 240  
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ttcaacacaaa ggttccaaac ctcagccata agacgcctca cctatgatag ctcagtgcc 360  
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 atattgaagg gtggtgacgc caaagttagc atggaagaga gggccggcct cactgttcca 1500  
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 tcttaa 1566

<210> 28  
 <211> 521  
 <212> PRT  
 <213> Phaseolus aureus

<400> 28

Met Leu Leu Glu Leu Ala Leu Gly Leu Leu Val Leu Ala Leu Phe Leu  
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His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg His Leu  
 20 25 30

Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu  
 35 40 45

His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser  
 50 55 60

Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met Pro Thr  
 65 70 75 80

Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His  
 85 90 95

Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg  
 100 105 110

Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp  
 115 120 125

Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr  
 130 135 140

Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe Leu  
 145 150 155 160

Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp Leu Thr  
 165 170 175

Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu  
 180 185 190

Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile  
 195 200 205

Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys His Leu  
 210 215 220  
 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe  
 225 230 235 240  
 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg  
 245 250 255  
 Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly Val Phe  
 260 265 270  
 Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Thr Glu Ile Lys  
 275 280 285  
 Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe Ser Ala  
 290 295 300  
 Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu Leu  
 305 310 315 320  
 Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val Tyr Ser  
 325 330 335  
 Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu  
 340 345 350  
 Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro  
 355 360 365  
 Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly  
 370 375 380  
 Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp Gln Val  
 385 390 395 400  
 Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu  
 405 410 415  
 Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Pro Leu Asp Leu  
 420 425 430  
 Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met  
 435 440 445  
 Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala  
 450 455 460  
 Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln  
 465 470 475 480  
 Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly  
 485 490 495  
 Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg  
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 <210> 29  
 <211> 1566  
 <212> DNA  
 <213> Phaseolus aureus

&lt;400&gt; 29

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 gaccctgtcg ttgaaagagt catcaagaag cgccgtgaga tcgtgaggag gagaagaac 780  
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 gagattaatg gatatgtat cccagagggc gcattgattc tcttcaatgt atggcaagta 1200  
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 tcttaa 1566

&lt;210&gt; 30

&lt;211&gt; 521

&lt;212&gt; PRT

&lt;213&gt; Phaseolus aureus

&lt;400&gt; 30

Met Leu Leu Glu Leu Ala Leu Gly Leu Leu Val Leu Ala Leu Phe Leu  
 1 5 10 15

His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg His Leu  
 20 25 30

Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu  
 35 40 45

His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser  
 50 55 60

Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met Pro Thr  
 65 70 75 80

Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His  
 85 90 95

Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg  
 100 105 110

Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp  
 115 120 125

Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr  
 130 135 140

Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe Leu  
 145 150 155 160

Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp Leu Thr  
 165 170 175  
 Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu  
 180 185 190  
 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile  
 195 200 205  
 Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys His Leu  
 210 215 220  
 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe  
 225 230 235 240  
 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg  
 245 250 255  
 Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly Val Phe  
 260 265 270  
 Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu Ile Lys  
 275 280 285  
 Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe Ser Ala  
 290 295 300  
 Gly Thr Asp Ser Thr Ala Glu Ala Thr Glu Trp Ala Leu Ala Glu Leu  
 305 310 315 320  
 Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val Tyr Ser  
 325 330 335  
 Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu  
 340 345 350  
 Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro  
 355 360 365  
 Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly  
 370 375 380  
 Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp Gln Val  
 385 390 395 400  
 Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu  
 405 410 415  
 Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Pro Leu Asp Leu  
 420 425 430  
 Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met  
 435 440 445  
 Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala  
 450 455 460  
 Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln  
 465 470 475 480  
 Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly  
 485 490 495  
 Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg  
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Ile Gly Val Ala Ser Lys Leu Leu Ser  
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<210> 31  
<211> 1566  
<212> DNA  
<213> Trifolium pratense

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tcttaa 1566

<210> 32  
<211> 521  
<212> PRT  
<213> Trifolium pratense

<400> 32  
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His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg His Leu  
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Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu  
35 40 45

His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser  
50 55 60

Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met Pro Thr  
65 70 75 80

Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His  
85 90 95

Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg  
100 105 110

Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Ile Gly Pro Tyr Trp  
115 120 125

Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr  
 130 135 140  
 Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe Leu  
 145 150 155 160  
 Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp Leu Thr  
 165 170 175  
 Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu  
 180 185 190  
 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile  
 195 200 205  
 Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys His Leu  
 210 215 220  
 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe  
 225 230 235 240  
 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg  
 245 250 255  
 Arg Arg Lys Asn Gly Glu Val Asp Glu Gly Glu Val Ser Gly Val Phe  
 260 265 270  
 Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Thr Glu Ile Lys  
 275 280 285  
 Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe Ser Ala  
 290 295 300  
 Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu Leu  
 305 310 315 320  
 Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val Tyr Ser  
 325 330 335  
 Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu  
 340 345 350  
 Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro  
 355 360 365  
 Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly  
 370 375 380  
 Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp Gln Val  
 385 390 395 400  
 Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu  
 405 410 415  
 Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Pro Leu Asp Leu  
 420 425 430  
 Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met  
 435 440 445  
 Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala  
 450 455 460  
 Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln  
 465 470 475 480

Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly  
 485 490 495

Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg  
 500 505 510

Ile Gly Val Ala Ser Lys Leu Leu Ser  
 515 520

<210> 33  
 <211> 1566  
 <212> DNA  
 <213> Trifolium pratense

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 cgtcttcctt tcataggaca cttcatctc taaaagaca aacttctcca ctacgcactc 180  
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 agggttatgg cccaggcgc agaggcacag aagcccttg acttgaccga ggagcttctg 540  
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 ttttctcggtt caggaacaga ctccacagcg gtggcaacag agtgggcatt ggcaactc 960  
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 gagattaatg gatatgtat cccagagggc gcattgattc tcttcaatgt atggcaagta 1200  
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 atattgaagg gtgggtgacgc caaaagttacg atgaaagaga gggccggctt cactgttcca 1500  
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 tcttaa 1566

<210> 34  
 <211> 521  
 <212> PRT  
 <213> Trifolium pratense

<400> 34  
 Met Leu Leu Glu Leu Ala Leu Gly Leu Leu Val Leu Ala Leu Phe Leu  
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His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg His Leu  
 20 25 30

Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu  
 35 40 45

His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser  
 50 55 60

Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met Pro Thr  
 65 70 75 80

Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His  
 85 90 95  
 Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg  
 100 105 110  
 Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp  
 115 120 125  
 Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr  
 130 135 140  
 Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe Leu  
 145 150 155 160  
 Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp Leu Thr  
 165 170 175  
 Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu  
 180 185 190  
 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile  
 195 200 205  
 Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys His Leu  
 210 215 220  
 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe  
 225 230 235 240  
 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg  
 245 250 255  
 Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly Val Phe  
 260 265 270  
 Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Thr Glu Ile Lys  
 275 280 285  
 Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe Ser Ala  
 290 295 300  
 Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu Leu  
 305 310 315 320  
 Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val Tyr Ser  
 325 330 335  
 Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu  
 340 345 350  
 Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro  
 355 360 365  
 Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly  
 370 375 380  
 Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp Gln Val  
 385 390 395 400  
 Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu  
 405 410 415  
 Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Pro Leu Asp Leu  
 420 425 430

Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met  
 435 440 445

Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala  
 450 455 460

Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln  
 465 470 475 480

Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly  
 485 490 495

Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg  
 500 505 510

Ile Gly Val Ala Ser Lys Leu Leu Ser  
 515 520

&lt;210&gt; 35

&lt;211&gt; 1563

&lt;212&gt; DNA

&lt;213&gt; Pisum sativum

&lt;400&gt; 35

atgttgctgg aacttgcaact tggtttgttt gtgttagctt tgtttctgca cttgcgtccc 60  
 acaccaagcg caaaatcaaa agacacttcgc caccctccaa accctccaag cccaaagcct 120  
 cgttccct tcattggcca ccttcacccctt taaaagata aacttctcca ctatgcactc 180  
 atcgatctct ccaaaaagac tggccccctta ttctctctct ctttcggctc catgccaacc 240  
 gtcgtgcct ccacccctga gtgttcaag ctcttcctcc aagcccacga ggcaacttcc 300  
 ttcacccacaa ggttccaaac ctctggccgt aagacccctca cttacgacaa ctctgtggcc 360  
 atggttccat tcggacccctt ctggaagttc gtgaggaagc tcatcatgaa cgaccccttc 420  
 aacgccccca cccgtcaacga gctcaggccct ttgagggaccc aacagatccg caagttccct 480  
 agggttatgg cccaaagcgc agaggccccag aagcccttg acgtcacccga ggagcttcc 540  
 aaatggacca acagcacccat ctccatgatg atgctccggcg aggctgagaa gatcagagac 600  
 atcgctcgcg aggtccttaa gatcttcggc gaatacagcc tcactgactt catctggcct 660  
 ttgaagtatc tcaagggttgg aaagtatgag aagaggattt atgacatctt gaacaagttc 720  
 gaccctgtcg ttgaaagggtt catcaagaag cgccgtgaga tcgtcagaag gagaaagaac 780  
 ggagaagttg ttgagggcga ggcacccggc gtcttcctcg acactttgtt tgaattcgct 840  
 gaggacgaga ccatggagat caaaattacc aaggagcaaa tcaagggcct tgggtcgac 900  
 ttttctctg cagggacaga ttccacagcg gtggcaacac agtgggcatt ggcagagctc 960  
 atcaacaatc ccagggttggt gcaaaaggct cgtgaggagg tctacagtgt tggggcaaa 1020  
 gatagactcg ttgacgaagt cgacactcaa aaccccttc acattaggcc cattgtgaag 1080  
 gagacattcc gaatgcaccc accactccca gtggtaaaaa gaaagtgcac agaagagtgt 1140  
 gagattaatg ggtatgtat cccagggga gcattgggttcc tttcaatgt ttggcaagta 1200  
 gggaaaggacc ccaaataactg ggacagacca tcagaattcc gtcccgagag gttcttagaa 1260  
 actggcgctg aaggggaagc agggcctt gatcttaggg gccagcattt ccaactccctc 1320  
 ccatttgggt ctgggaggag aatgtccctt ggtgtcaatt tggctacttc aggaatggca 1380  
 acacttcttg catctcttat ccaatgcttt gacctgcaag tgctgggccc tcaaggacaa 1440  
 atattgaaag gtgacgatgc caaagtttgc atgaaagaga gagctggcct caccgttcca 1500  
 agggcacata gtctcggtt gttccactt gcaaggatcg gcggtgcattc taaactccctt 1560  
 tct 1563

&lt;210&gt; 36

&lt;211&gt; 521

&lt;212&gt; PRT

&lt;213&gt; Pisum sativum

&lt;400&gt; 36

Met Leu Leu Glu Leu Ala Leu Gly Leu Phe Val Leu Ala Leu Phe Leu  
 1 5 10 15

His Leu Arg Pro Thr Pro Ser Ala Lys Ser Lys Ala Leu Arg His Leu  
 20 25 30

Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu  
 35 40 45

His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser  
 50 55 60

Lys Lys His Gly Pro Leu Phe Ser Leu Ser Phe Gly Ser Met Pro Thr  
 65 70 75 80

Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Ala His  
 85 90 95

Glu Ala Thr Ser Phe Ser Thr Arg Phe Gln Thr Ser Ala Val Arg Arg  
 100 105 110

Leu Thr Tyr Asp Asn Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp  
 115 120 125

Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr  
 130 135 140

Val Asn Glu Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe Leu  
 145 150 155 160

Arg Val Met Ala Gln Ser Ala Glu Ala Gln Lys Pro Leu Asp Val Thr  
 165 170 175

Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met Leu  
 180 185 190

Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile  
 195 200 205

Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys Tyr Leu  
 210 215 220

Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe  
 225 230 235 240

Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg  
 245 250 255

Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Ala Ser Gly Val Phe  
 260 265 270

Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu Ile Lys  
 275 280 285

Ile Thr Lys Glu Gln Ile Lys Gly Leu Val Val Asp Phe Phe Ser Ala  
 290 295 300

Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu Leu  
 305 310 315 320

Ile Asn Asn Pro Arg Val Leu Gln Lys Ala Arg Glu Glu Val Tyr Ser  
 325 330 335

Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu  
 340 345 350

Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro  
 355 360 365

Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly  
 370 375 380

Tyr Val Ile Pro Glu Gly Ala Leu Val Leu Phe Asn Val Trp Gln Val  
 385 390 395 400

Gly Lys Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu  
 405 410 415

Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Gly Pro Leu Asp Leu  
 420 425 430

Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met  
 435 440 445

Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala  
 450 455 460

Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln  
 465 470 475 480

Ile Leu Lys Gly Asp Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly  
 485 490 495

Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg  
 500 505 510

Ile Gly Val Ala Ser Lys Leu Leu Ser  
 515 520

<210> 37

<211> 1496

<212> DNA

<213> Trifolium repens

<400> 37

tctcaattgc gtccccacacc aagtgcataa tcaaaagcac ttgcacccact cccaaaccct 60  
 ccaagcccaa ggccctcgct tccttcatt ggccacccct acctcttaaa agataaactt 120  
 ctccactatg caccatcga tctctccaaa aagcatggcc cttatttc tcttccttc 180  
 ggctccatgc caaccgtcgt tgccctccacc cctgagttgt tcaagctctt cttccaaacc 240  
 cacgaggcaa ctcttcctcaa cacaagggttc caaacctctg ccataagaca cttcaactac 300  
 gacaactctg tggccatggc tccattcgga cttactggc agttcgtgag gaagctcatc 360  
 atgaacgacc ttctcaacgc caccaccgtc aacaagctca ggccctttag gaccacaacag 420  
 atccgcaagt tccttagggt tatggcccaa agcgcagagg cccagaagcc ctttgacgtc 480  
 accgaggagc ttctcaatg gaccaacagc accatctcca tggatgtgt cggcgaggct 540  
 gaggagatca gagacatcgc tcgcgaggtt cttaagatct tcggcgaata cagcctca 600  
 gacttcatct ggcccttgaa gtacctcaag gttggaaagt atgagaagag gattgtatgac 660  
 atcttgaaca agttcgaccc tgcgttgcgaa agggtcatca agaagcgccg tgagatcg 720  
 agaaggagaa agaacggaga agttgttgcg ggcgaggcc gccggcgtctt cctcgacact 780  
 ttgttgcatt tcgcgttgcgaa cgagaccatg gagatcaaaa ttaccaagga gcaaatcaag 840  
 ggcccttgcgaa tcgactttt ctgcgaggc acaggatcca cagcgggtgtt aacagagtgg 900  
 gcattggcag agtcatcaa caatcccagg gtgttgcataa aggctcgatc ggaggtctac 960  
 agtgttgcgaa gcaaagatag actcggtgac gaagttgaca ctcaaaacat tccttacatt 1020  
 agggccattt tgaaggagac attccgaatg caccacccac tcccagtgtt caaaagaaag 1080  
 tgcacagaag agtgttgcgaa taatgggtat gtgatcccag agggagcatt gtttttttc 1140  
 aatgtttggc aagtaggaag ggaccccaaa tactgggaca gaccatcaga atccgtccc 1200  
 gagaggttct tagaaactgg tgcgttgcgaa gaagcaggcc ctcttgcatt taggggccc 1260  
 catttccaaac tcctccatt tgggtctggg aggaaatgt gcccgtgtt cagtttgcgt 1320  
 acttcaggaa tggcaacact tcattgcattt ctatccaat gtttgaccc gcaagtgc 1380  
 ggccttcacag gacaaatatt gaaagggtgtt gatgcacaaag ttagcatgga agagagagct 1440  
 ggccttcacag ttccaaaggcc acatgtctc gtttgcgtt cacttgcaag gatcgg 1496

<210> 38

<211> 498

<212> PRT

<213> Trifolium repens

<400> 38

Ser His Leu Arg Pro Thr Pro Ser Ala Ile Ser Lys Ala Leu Arg His  
 1 5 10 15

Leu Pro Asn Pro Pro Ser Pro Arg Pro Arg Leu Pro Phe Ile Gly His  
 20 25 30

Leu His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Pro Ile Asp Leu  
 35 40 45

Ser Lys Lys His Gly Pro Leu Phe Ser Leu Ser Phe Gly Ser Met Pro  
 50 55 60

Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr  
 65 70 75 80

His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg  
 85 90 95

His Leu Thr Tyr Asp Asn Ser Val Ala Met Val Pro Phe Gly Pro Tyr  
 100 105 110

Trp Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr  
 115 120 125

Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe  
 130 135 140

Leu Arg Val Met Ala Gln Ser Ala Glu Ala Gln Lys Pro Leu Asp Val  
 145 150 155 160

Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Met  
 165 170 175

Leu Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys  
 180 185 190

Ile Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys Tyr  
 195 200 205

Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys  
 210 215 220

Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val  
 225 230 235 240

Arg Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Ala Ser Gly Val  
 245 250 255

Phe Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu Ile  
 260 265 270

Lys Ile Thr Lys Glu Gln Ile Lys Gly Leu Val Val Asp Phe Phe Ser  
 275 280 285

Ala Gly Thr Asp Ser Thr Ala Val Val Thr Glu Trp Ala Leu Ala Glu  
 290 295 300

Leu Ile Asn Asn Pro Arg Val Leu Gln Lys Ala Arg Glu Glu Val Tyr  
 305 310 315 320

Ser Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn  
 325 330 335

Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro  
 340 345 350

Pro Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn  
 355 360 365

Gly Tyr Val Ile Pro Glu Gly Ala Leu Val Leu Phe Asn Val Trp Gln  
 370 375 380  
 Val Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Ser Arg Pro  
 385 390 395 400  
 Glu Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Gly Pro Leu Asp  
 405 410 415  
 Leu Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg  
 420 425 430  
 Met Cys Pro Gly Val Ser Leu Ala Thr Ser Gly Met Ala Thr Leu Leu  
 435 440 445  
 Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly  
 450 455 460  
 Gln Ile Leu Lys Gly Asp Asp Ala Lys Val Ser Met Glu Glu Arg Ala  
 465 470 475 480  
 Gly Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala  
 485 490 495  
 Arg Ile

<210> 39  
 <211> 1501  
 <212> DNA  
 <213> Trifolium repens

<400> 39  
 tggcgtccc acacccactg caaaatcaaa agcaattcg catctccaa 60  
 acccacaag cccaaagcct cgtttccct tcataaggaca cttcatctc taaaagaca 120  
 aacttctcca ctacgcactc atcgacctt caaaaaaca tggccctt ttctctct 180  
 actttggctc catgccaacc gttgttgcc ctacaccaga attgttcaag ctttctcc 240  
 aaacgcacga ggcacattcc ttcaacacaa gttccaaac ctacccata agacgcctca 300  
 cttacgacaa ctctgtggcc atggttccat tcggacctt ctggaaaggcc ttgagggacc 360  
 tcatcatgaa cgacccatctc aacgcccacca cgtcaacaa gtcaggcc ttgaggacc 420  
 aacagatccg caagttctt agggttatgg cccaaagcgc agaggcccg aagcccttg 480  
 acgtcaccga ggagctctc aaatggacca acagcaccat ctccatgtg atgctggcg 540  
 aggctgagac gatcggaccc atcgctcgcc aggttctt gatcttcggc gaatacagcc 600  
 tcactgactt catctggct ttgaagtatc tcaaggttgg aaagtatgag aagaggattg 660  
 atgacatctt gaacaagttt gaccctgtc ttgaaaggat catcaagaag cgcgtgaga 720  
 tcgtcagaag gagaagaac ggagaaggtt tgaggggca ggcacggc gtcttcctcg 780  
 acactttgtc tgaattcgct gaggacgaga ccatggatg caaaattacc aaggagcaaa 840  
 tcaaggccct tgggtcgac ttttctctt caggacaga ttccacagcg gtggcaacag 900  
 agtgggcatt ggcagagctc atcaacaatc ccaagggtt gcaaaaggct cgtgaggagg 960  
 cctacagtgt tggggcaaa gatagactcg ttgaccaatg tgacactcaa aacccctt 1020  
 acattaggcc cattgtgaaag gagacattcc gaatgcaccc accactccca gtggcaaaa 1080  
 gaaagtgcac agaagagtgt ggattaaatg ggtatgtat cccagaggga gcattggcc 1140  
 tttcaatgt ttggcaagta ggaaggggacc ccaataactg ggacagacca tcagaattcc 1200  
 gtcccgagag gttcttagaa actggtgctt aagggaaagc agggcctt gatcttaggg 1260  
 gccacgtt ccaacttc ccatgggt ctgggaggag aatgtccctt ggtgtcaatt 1320  
 tggctacttc aggaatggca acacttctt catctctt ccaatgtttt gacctgcaag 1380  
 tgctggccccc tcaaggacaa atattgaaag gtgtatgtc caaagttac atgaaagaga 1440  
 gagctggccct cacagttcca agggcacata gtctcgttt tgttccactt gcaaggatcg 1500  
 g

<210> 40  
 <211> 499  
 <212> PRT  
 <213> Trifolium repens

<400> 40  
 Phe Leu His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg  
 1 5 10 15

His Leu Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly  
 20 25 30

His Leu His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp  
 35 40 45

Leu Ser Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met  
 50 55 60

Pro Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln  
 65 70 75 80

Thr His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile  
 85 90 95

Arg Arg Leu Thr Tyr Asp Asn Ser Val Ala Met Val Pro Phe Gly Pro  
 100 105 110

Tyr Trp Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala  
 115 120 125

Thr Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys  
 130 135 140

Phe Leu Arg Val Met Ala Gln Ser Ala Glu Ala Gln Lys Pro Leu Asp  
 145 150 155 160

Val Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met  
 165 170 175

Met Leu Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu  
 180 185 190

Lys Ile Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys  
 195 200 205

Tyr Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn  
 210 215 220

Lys Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile  
 225 230 235 240

Val Arg Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Ala Ser Gly  
 245 250 255

Val Phe Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu  
 260 265 270

Ile Lys Ile Thr Lys Glu Gln Ile Lys Gly Leu Val Val Asp Phe Phe  
 275 280 285

Ser Ala Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala  
 290 295 300

Glu Leu Ile Asn Asn Pro Lys Val Leu Gln Lys Ala Arg Glu Glu Ala  
 305 310 315 320

Tyr Ser Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln  
 325 330 335

Asn Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His  
 340 345 350

Pro Pro Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Gly Ile  
 355 360 365

Asn Gly Tyr Val Ile Pro Glu Gly Ala Leu Val Leu Phe Asn Val Trp  
 370 375 380

Gln Val Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg  
 385 390 395 400

Pro Glu Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Gly Pro Leu  
 405 410 415

Asp Leu Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg  
 420 425 430

Arg Met Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu  
 435 440 445

Leu Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln  
 450 455 460

Gly Gln Ile Leu Lys Gly Asp Asp Ala Lys Val Ser Met Glu Glu Arg  
 465 470 475 480

Ala Gly Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu  
 485 490 495

Ala Arg Ile

<210> 41  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:PCR primer

<400> 41  
 ttgctggaac ttgcacttgg t

21

<210> 42  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:PCR primer

<400> 42  
 gtatatgtatg ggtacccattaa ttaagaaagg ag

32

<210> 43  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:PCR primer

<400> 43  
 gacgcctcac ttacgacaac tctgtg

26

<210> 44  
 <211> 25

<212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:PCR primer  
  
 <400> 44  
 cctctcgaaa cgaaattctg atggt 25  
  
 <210> 45  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:PCR primer  
  
 <400> 45  
 gcggtgacg ggcggactct tcttc 25  
  
 <210> 46  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence:PCR primer  
  
 <400> 46  
 cgcggcaatac gcaaaccggcc tctcc 25  
  
 <210> 47  
 <211> 1501  
 <212> DNA  
 <213> Beta vulgaris  
  
 <400> 47  
 tggttctgca cttgcgtccc acacccactg caaaatcaaa agcacttcgc catctccaa 60  
 acccacaag cccaaagct cgtctccct tcataaggaca ccttcatctc ttaaaagaca 120  
 aacttctcca ctacgactc atgcacctc ccaaaaaaca tggtccctta ttctctctc 180  
 actttggctc catgccaacc gttgttgct ccacaccaga attgttcaag ctcttcctcc 240  
 aaacgcacga ggcaactcc ttcacacacaa gtttccaaac ctcagccata agacgcctca 300  
 cctatgatag ctcagtggcc atggttccct tcggacccctt ctggaagttc gtgaggaagc 360  
 tcatacatgaa cgacccctc aacgcccacca ctgtaaaccaa gttgaggccct ttgaggaccc 420  
 aacagatccg caagttccct agggttatgg cccaaaggcgc agaggcacag aagcccttg 480  
 acttgaccga ggagttctg aaatggacca acagccatctccatgtat atgtcggcg 540  
 aggctgagga gatcagagac atcgctcgcg aggttcttta gatctttggc gaatacagcc 600  
 tcactgactt catctggcca ttgaagcatc tcaagggttgg aaagtatgag aagaggatcg 660  
 acgacatctt gaacaagttc gaccctgtcg ttgaaagagt catcaagaag cgccgtgaga 720  
 tcgtgaggag gagaaagaac ggagaggatg ttgagggtga ggtcagccgg gtttccttg 780  
 acactttgtc tgaattcgct gaggatgaga ccatggagat caaaatcacc aaggaccaca 840  
 tcaagggtct tggtgtcgac tttttctcgg caggaacaga ctccacagcg gtggcaacag 900  
 agtgggcatt ggcagaactc atcaacaatc ctaaggtgtt gggaaaggct cgtgaggagg 960  
 tctacagtgt tggggaaag gacagacttg tggacgaaatg agacactcaa aacccctt 1020  
 acattagagc aatcgtaag gagacattcc gcatgcaccc gccactccca gtggtcaaaa 1080  
 gaaagtgcatt agaagagtgt gagattaatg gatatgtat cccagaggga gcattgattc 1140  
 tcttcattgt atggcaagta ggaagagacc ctaaaatctg ggacagacca tcggagttcc 1200  
 gtccctgagag gttccttagag acaggggctg aaggggaaac aaggcttctt gatcttaggg 1260  
 gacaacattt tcaacttctc ccattttgggt ctgggaggag aatgtccctt ggagtcaatc 1320  
 tggctacttc gggaaatggca acacttctt catctcttcat tcagtgcattt gacttgcaag 1380  
 tgctgggtcc acaaggacag atattgaagg gtggtgacgc caaagtttagc atggaaagaga 1440  
 gagccggcct cactgttcca agggcacata gtcttgcctg tggccactt gcaaggatcg 1500  
 g 1501

<210> 48  
 <211> 499

<212> PRT  
 <213> Beta vulgaris

<400> 48  
 Phe Leu His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg  
 1 5 10 15  
 His Leu Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly  
 20 25 30  
 His Leu His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp  
 35 40 45  
 Leu Ser Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met  
 50 55 60  
 Pro Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln  
 65 70 75 80  
 Thr His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile  
 85 90 95  
 Arg Arg Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro  
 100 105 110  
 Tyr Trp Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala  
 115 120 125  
 Thr Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys  
 130 135 140  
 Phe Leu Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp  
 145 150 155 160  
 Leu Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met  
 165 170 175  
 Met Leu Gly Glu Ala Glu Ile Arg Asp Ile Ala Arg Glu Val Leu  
 180 185 190  
 Lys Ile Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys  
 195 200 205  
 His Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn  
 210 215 220  
 Lys Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile  
 225 230 235 240  
 Val Arg Arg Arg Lys Asn Gly Glu Asp Val Glu Gly Glu Val Ser Gly  
 245 250 255  
 Val Phe Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu  
 260 265 270  
 Ile Lys Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe  
 275 280 285  
 Ser Ala Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala  
 290 295 300  
 Glu Leu Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val  
 305 310 315 320  
 Tyr Ser Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln  
 325 330 335

Asn Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His  
 340 345 350

Pro Pro Leu Pro Val Val Lys Arg Lys Cys Ile Glu Glu Cys Glu Ile  
 355 360 365

Asn Gly Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp  
 370 375 380

Gln Val Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg  
 385 390 395 400

Pro Glu Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Leu Leu  
 405 410 415

Asp Leu Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg  
 420 425 430

Arg Met Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu  
 435 440 445

Leu Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln  
 450 455 460

Gly Gln Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg  
 465 470 475 480

Ala Gly Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu  
 485 490 495

Ala Arg Ile

<210> 49

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 49

gaattcgcgg ccgctctaga actagtggat

30

<210> 50

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 50

gaattcgcgg ccgcgaattt ggtaccgggc

30

<210> 51

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR primer

<400> 51

gcaaacgaag acaaatggga gatgata

27

<210> 52  
 <211> 1801  
 <212> DNA  
 <213> Glycine max

<220>  
 <221> intron  
 <222> (895)...(1112)

<400> 52

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ccaaagtgcAA	aatcaaaaAGC	acttcgcccAC	ctcccaaacc	ctccaaggccc	aaaggcctcgT	120
cttcccttca	ttggccacCT	tcaccccttta	aaagataaaAC	ttctccacta	tgactctatC	180
gatctctcca	aaaagcatgg	ccccttattc	tctctctcct	tcggctccat	gc当地accgtc	240
gttgcctcca	cccctgagtt	gttcaagctc	ttccctccaa	cccacgaggc	aacttccttc	300
aacacaaggt	tccaaacactc	tgccataaga	cgccctactt	acgacaactc	tgtggccatg	360
gttccatcg	gacctactg	gaagttcgT	aggaagctca	tcatgaacga	ccttctcaac	420
gc当地accac	tcaacaagat	caggcccttG	aggacccaaAC	agatccgcaa	gttcccttagg	480
gtatggccc	aaagcgcaga	gccccagaag	cccccttgcg	tcacccgagg	gcttctcaaa	540
tggaccaaca	gcaccatctc	catgatgatG	ctcggcgagg	ctgaggagat	cagagacatc	600
gctcgcgagg	ttcttaagat	cttcggcgaa	tacagcctca	ctgacttcat	ctggcctttG	660
aagtatctca	aggttggaaa	gtatgagaag	aggattgtatG	acatcttGaa	caagttcgac	720
cctgtcgtt	aaagggtcat	caagaagcgc	cgtgagatcg	tcagaaggag	aaagaacggA	780
gaagttgttG	agggcgaggc	cagccgcgtc	ttccctcgaca	ctttgcttga	attcgctgag	840
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ttccttcttc	tctcctactt	tattacttG	tttcattcat	catatgtatt	ggcattaaat	960
atataactat	atgagaaaat	atgttacgca	ctcacgggt	aaagatatgt	ggtgttttt	1020
taaaaagaga	tacagaagtt	gttccatgc	atgtatgttA	acgtatattt	actcaagtgg	1080
aaactaatta	attctcaatt	ttgggtatgt	aggactttt	ctctgcaggg	acagattcca	1140
cagcgggtggc	aacagagtgg	gcattggcag	agctcatcaa	caatcccagg	gtgttgcaaa	1200
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ctccaaaacct	tccttacatt	agggccatG	tgaaggagac	atccgaatG	caccacccac	1320
tcccaagtgt	caaaaagaaag	tgcacagaaag	agtgtgagat	taatgggtat	gtgatcccag	1380
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gaccatcaga	attccgtccc	gagaggttct	tagaaaactgg	tgctgaaggg	gaagcaggGc	1500
ctcttgcatt	tagggccag	catttccaaac	tcctccatt	tgggtcttgg	aggagaatgt	1560
gccctgggtgt	caatttggct	acttcaggaa	tggcaacact	tcttgcacat	cttatccaaat	1620
gctttgacct	gcaagtgtcg	ggccctcaag	gacaaaatatt	gaaaggtgat	gatgccaaag	1680
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cacttgcaag	gatcgccgtt	gcatctaaac	tccttctta	attaaggat	ccatcatata	1800
C						1801
aattagcctc	acaaaagcaa	agatcaaaca	aaccaaggac	gagaacacga	tgttgcttga	60
acttgcactt	ggtttattgg	ttttggctt	gtttctgcac	ttgcgtccca	cacccactgc	120
aaaatcaaaa	gcacttcgccc	atctccaaa	cccaccaagc	ccaaaggcctc	gtcttccctt	180
cataggacac	cttcatctct	taaaagacaa	acttctccac	tacgcaactca	tcgacccctc	240
aaaaaaacat	ggtcccttat	tctctctct	ctttggctcc	atgccaaccg	ttgttgccctc	300
cacaccagaa	ttgttcaaggc	tcttcctcca	aacgcacgag	gcaacttct	tcaacacaaag	360
gttccaaacc	tcagccataa	gacgcctcac	ctatgatgc	tcaatggcc	tgggtccctt	420
cggacccatc	tggaaagtgc	tgaggaagct	catcatgaac	gaccccttca	acgcccaccac	480
tgtaaacaag	ttgaggccct	tgaggaccac	acagacccgc	aagtccctt	gggttatggc	540
ccaaaggcgca	gaggcacaga	agcccccttga	cttgaccgag	gagcttctga	aatggaccaa	600
cagcaccatc	tccatgatga	tgctcggcga	ggctgaggag	atcagagaca	tcgctcgca	660
ggttcttaag	atcttggcg	aatacagctt	caactgactc	atctggccat	tgaaggatct	720
caaggttggA	aagtatgaga	agaggatcgA	cgacatcttG	aacaagttcg	accctgtcg	780

tgaaaagggtc atcaagaagc gccgtgagat cgtgaggagg agaaaagaacg gagagggtgt 840  
 tgagggtgag gtcagcgggg ttttccttga cacttgctt gaattcgcgtg aggatgagac 900  
 catggagatc aaaatcacca aggaccatcg cgagggctt gttgtcgta gttcctgtct 960  
 tcattcattg atcgaaatat gcagtatttt gttacaaga gatcgagaat tgacatttat 1020  
 atattcatgt ggtggcaatt attaacgtt acgcatttt aatcgatatt gtgtatgtgc 1080  
 aggactttt ctcggcagga acagactcca cagcgggtgc aacagatgg gcattggcag 1140  
 aactcatcaa caatcctaag gtgttggaaa aggctcgta ggaggtctac agtgggtgtgg 1200  
 gaaaggacag acttgtggac gaagttgaca ctcaaaacct tccttacatt agagcaatcg 1260  
 tgaaggagac attccgcattt caccggccac tcccaagtggt caaaaagaaag tgcacagaag 1320  
 agtgtgagat taatggatatt gtgatcccag agggagcatt gattcttcc aatgtatggc 1380  
 aagttaggaag agaccacaaa tactgggaca gaccatcgga gttccgtcct gagaggttcc 1440  
 tagagacagg ggctgaaggg gaagcaggcc ctcttgatct taggggacaa catttcaac 1500  
 ttctccatt tgggtctggg aggagaatgt gcccctggagt caatctgct acttcggaa 1560  
 tggcaacact tcttgcattt ctattcagt gcttcgactt gcaagtgtcg ggtccacaag 1620  
 gacagatatt gaagggtgtt gacgcacaaat tttagcatggg agagagagcc ggcttcactg 1680  
 ttccaagggc acatagtc ttgtgtgtc cactgcaag gatcggcggt gcatctaaac 1740  
 tcctttctta attaagatca tgcgtcatcat catcatatat aatatttact tttgtgtgt 1800  
 tgataatcat catttcaata aggttcgtt catctacttt ttatgaagta tataaggccct 1860  
 tccatgcaca ttgtatcatc tcccatatttgc ttgcgttgc 1900

<210> 54  
 <211> 1501

<212> DNA

<213> Lupinus albus

<400> 54

tgtttctgca cttgcgtccc acacccactg caaaatcaaa agcacttcgc catctccaa 60  
 accaccaag cccaaagct cgtttccct tcataaggaca ccttcatctc taaaagaca 120  
 aacttctcca ctacgcactc atcgacctt ccaaaaaaca tggtccctta ttctctctct 180  
 actttggctc catgcacca gttgttgctt ccacaccaga attgttcaag ctcttcctcc 240  
 aaacgcacga ggcaacttcc ttcaacacaa gtttccaaac ctcagccata agacgcctca 300  
 cctatgatag ctcagtgcc agggttccct tcggacctt tctggagttc gtgaggaagc 360  
 tcatacatgaa cgaccttctt aacgcacca ctgtaaaacaa gttgaggcc ttgaggaccc 420  
 aacagatccg caagttcctt agggttatgg cccaaggcgc agaggcacag aagcccttg 480  
 acttgaccga ggagcttctg aatggacca acagaccat ctccatgatg atgctcggcg 540  
 aggctgagga gatcagagac atcgctcgcc aggttcttaa gatctttgc gaatacagcc 600  
 tcactgactt catctggcca ttgaagcatc tcaaggttg aaagtatgag aagaggatcg 660  
 acgacatctt gaacaagttc gaccctgtcg ttgaaagagt catcaagaag cgccgtgaga 720  
 tcgtgaggag gagaagaagac ggagaggtt gttgagggtga ggtcagcggg gtttccttg 780  
 acactttgtct tgaattcgct gaggatgaga ccatggagat caaaatcacc aagaccaca 840  
 tcaagggtct tgggtgcac ttttctcgg cagaacacaa ctccacagcg gtggcaacag 900  
 agtggcgtt ggcagaactc atcaacaatc ctaaagggtt gaaaagggtct cgtgaggagg 960  
 tctacagtgt tggggaaaag gagagactt gggacgtt tgacactcaa aaccttcctt 1020  
 acatttagagc aatcgtaag gagacatttc gcatgcaccc gcccactcca gtggtaaaaa 1080  
 gaaagtgcac agaagagtgt gagattaatg gatatgtat cccagaggg gcatgttcc 1140  
 tcttcaatgt atggcaagta ggaagagacc ccaaatactg ggacagacca tggagttcc 1200  
 gtccctgagag gttccttagag acagaggctt aagggaagc aaggcctt gatcttaggg 1260  
 gacaacattt tcaacttctc ccatttgggt ctggaggag aatgtccctt ggagtcatc 1320  
 tggctacttc gggaatggca acacttctt catctttat tcaatgtttt gacttgcag 1380  
 tgctgggtcc acaaggacag atattgaagg gtggtgacgc caaagttac atgaaagaga 1440  
 gagccggcct cactgttcca agggcacata gtctgtctg tggccactt gcaaggatcg 1500  
 g

<210> 55  
 <211> 499  
 <212> PRT  
 <213> Lupinus albus

<400> 49

Phe Leu His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg  
 1 5 10 15

His Leu Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly  
 20 25 30

His Leu His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp  
 35 40 45

Leu Ser Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met  
 50 55 60

Pro Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln  
 65 70 75 80

Thr His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile  
 85 90 95

Arg Arg Leu Thr Tyr Asp Ser Ser Val Ala Arg Val Pro Phe Gly Pro  
 100 105 110

Tyr Trp Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala  
 115 120 125

Thr Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys  
 130 135 140

Phe Leu Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp  
 145 150 155 160

Leu Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met  
 165 170 175

Met Leu Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu  
 180 185 190

Lys Ile Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys  
 195 200 205

His Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn  
 210 215 220

Lys Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile  
 225 230 235 240

Val Arg Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly  
 245 250 255

Val Leu Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu  
 260 265 270

Ile Lys Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe  
 275 280 285

Ser Ala Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala  
 290 295 300

Glu Leu Ile Asn Asn Pro Lys Val Leu Glu Arg Ala Arg Glu Glu Val  
 305 310 315 320

Tyr Ser Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln  
 325 330 335

Asn Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His  
 340 345 350

Pro Pro Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile  
 355 360 365

Asn Gly Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp  
 370 375 380

Gln Val Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg  
 385 390 395 400

Pro Glu Arg Phe Leu Glu Thr Glu Ala Glu Gly Glu Ala Arg Pro Leu  
 405 410 415

Asp Leu Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg  
 420 425 430

Arg Met Cys Pro Gly Val Ile Leu Ala Thr Ser Gly Met Ala Thr Leu  
 435 440 445

Leu Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln  
 450 455 460

Gly Gln Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg  
 465 470 475 480

Ala Gly Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu  
 485 490 495

Ala Arg Ile

<210> 56

<211> 1501

<212> DNA

<213> *Medicago sativa*

<400> 56

tgttctgca cttgcgtccc acacccactg caaaaatcaaa agcacttcgc catctcccaa 60  
 acccacaag cccaaagcct cgtctccct tcataaggaca ccttcatctc ttaaaagaca 120  
 aacttctcca ctacgcaactc atcgacactt ccaaaaaaca tggtccctta ttctctctc 180  
 actttggctc catgccaacc gttgttgct ccacaccaga attgttcaag ctcttccttc 240  
 aaacgcacga ggcaacttcc ttcaacacaa ggttccaaac ctcagccata agacgcctca 300  
 cctatgatacg ctcagttggcc atggctccct tcggacctt ctggaaagttc gtgaggaagc 360  
 tcatcatgaa cgaccttctc aacgccacca ctgtaaacaa gttgaggcct ttgaggacc 420  
 aacagatccg caagttcctt agggttatgg cccaaaggcgc agaggcacag aagcccttg 480  
 acttgaccga ggagcttctg aaatggacca acagcaccac ctccatgatg atgctcgccg 540  
 aggctgagga gatcagagac atcgcccgcg aggttcttaa gatctttggc gaatacagcc 600  
 tcactgactt catccggcca ttgaagcatc tcaaggttgg aaagtatgag aagaggatcg 660  
 acgacatctt gaacaagttc gaccctgtcg ttgaaagagt catcaagaag cggcgtgaga 720  
 tcgtgaggaa gagaagaac ggagaggtt tgagggtga ggtcagccgg gtttccctt 780  
 acactttgc tgaattcgct gaggatgaga ccacggat caaaatacc aaggaccaca 840  
 tcaagggtct tgggtcgac ttttctcgg caggaacaga ctccacacgc gtggcaacag 900  
 agtgggcattt ggcagaactc atcaacaatc ctaaggtttt ggaaaaggct cgtgaggagg 960  
 ttcacagtgt tggggaaag gacagactt tggacactt tgacactcaa aacccctt 1020  
 acatttgc aatcgttgc gggatcc gcatgcaccc gccacttccaa gtggtcaaaaa 1080  
 gaaaatgcac agaagagtgt gaggatattt gatatgtat cccagaggaa gcattgattc 1140  
 ttttcaatgtt atggcaagttt ggaagagact ccaaataactg ggacagacca tcggagttcc 1200  
 gttctgagag gttcttagag acaggggcgtt aaggggaagc aaggccctt gatcttaggg 1260  
 gacaacattt tcaacttctc ccatttgggtt ctggggaggat aatgtccctt ggagtcaatc 1320  
 tggctacttc gggatggca acacttctt catctttat tcaatgtt gacttgcaag 1380  
 tggctgggtcc acaaggacag atattgaagg gtggtgcgc caaagttagc atgaaagaga 1440  
 gggccggcctt cactgttcca agggcacata gtcttgcgtt tggccactt gcaaggatcg 1500  
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<210> 57

<211> 499

<212> PRT

<213> *Medicago sativa*

<400> 57

Phe Leu His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg  
 1 5 10 15

His Leu Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly  
 20 25 30

His Leu His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp  
 35 40 45

Leu Ser Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met  
 50 55 60

Pro Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln  
 65 70 75 80

Thr His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile  
 85 90 95

Arg Arg Leu Thr Tyr Asp Ser Ser Val Ala Met Ala Pro Phe Gly Pro  
 100 105 110

Tyr Trp Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala  
 115 120 125

Thr Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys  
 130 135 140

Phe Leu Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp  
 145 150 155 160

Leu Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Thr Ser Met Met  
 165 170 175

Met Leu Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu  
 180 185 190

Lys Ile Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Arg Pro Leu Lys  
 195 200 205

His Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn  
 210 215 220

Lys Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile  
 225 230 235 240

Val Arg Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly  
 245 250 255

Val Phe Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Thr Glu  
 260 265 270

Ile Lys Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe  
 275 280 285

Ser Ala Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala  
 290 295 300

Glu Leu Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val  
 305 310 315 320

Tyr Ser Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln  
 325 330 335

Asn Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His  
 340 345 350

Pro Pro Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile  
 355 360 365

Asn Gly Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp  
 370 375 380

Gln Val Gly Arg Asp Ser Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg  
 385 390 395 400

Pro Glu Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Pro Leu  
 405 410 415

Asp Leu Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg  
 420 425 430

Arg Met Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu  
 435 440 445

Leu Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln  
 450 455 460

Gly Gln Ile Leu Lys Gly Gly Asp Ala Lys Val Ser Met Glu Glu Arg  
 465 470 475 480

Ala Gly Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu  
 485 490 495

Ala Arg Ile

<210> 58

<211> 1501

<212> DNA

<213> *Medicago sativa*

<400> 58

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 aacttctcca ctacgcactc atcgacctct ccaaaaaaca tggccctta ttctctct 180  
 actttggctc catgccaacc gtgttgcct ccacaccaga attgttcaag ctctccctcc 240  
 aaacgcacga ggcaacttcc ttcaacacaa gttccaaac ctcagccata agacgcctca 300  
 cctatgatag ctcagttggcc atggcccttc tcggacctt ctggaaatgtt gtagggaaagc 360  
 tcatcatgaa cgaccttc aacgcccacca ctgtaaacaa gttgaggcct ttgaggaccc 420  
 aacagatccg caagcttctt agggatatgg cccaaaggcgc agaggcacag aagcccttg 480  
 acttgaccga ggagcttctg aaatggacca acagcacat ctccatgtat atgctcggcg 540  
 aggctgagga gatcagagac atcgctcgcg aggttcttaa gatctttggc gaatacagcc 600  
 tcactgactt catctggcca ttgaagcatc tcaagttgg aagatgtatgg aagaggatcg 660  
 acgacatctt gaacaagttc gaccctgtcg ttgaaagatgt catcaagaag cgcgtgaga 720  
 tcgtgaggag gagaaagaac ggagaggta ttgagggtga ggtcagcgg gtttccttg 780  
 acactttgtc tgaattcgct gaggtatgaga ccacggagat caaaatcacc aaggaccaca 840  
 tcaagggtct tgggtcgac ttttctcg caggaacaga ctccacagcg gtggcaacag 900  
 agtgggcatt ggcagaactc atcaacaatc ctaagggtt ggagaaggct cgtgaggagg 960  
 tctacagtgt tggggaaag gacagacttg tggacaagt tgacactcaa aacccctt 1020  
 acat tagagc aatcgtaag gagacattcc gcatgcaccc gccactccca gtggtaaaa 1080  
 gaaagtgcac agaagagtgt gagattaatg gatatgtat cccagaggaa gcattgattc 1140  
 tcttcaatgt atggcaagta ggaagagacc ccaaatactg ggacagacca tcggagttcc 1200  
 gtcctgagag gttccttagag acaggggctg aagggaaagc aaggccctt gatcttaggg 1260  
 gacaacattt tcaacttctc ccattgggt ctgggaggag aatgtgcctt ggagtcaatc 1320  
 tggctacttc gggaaatggca acacttctt catctttat tcaatgtgtt gacttgcag 1380  
 tgctgggtcc acaaggacag atattgaagg gtgtgacgc caaagttagc atgaaagaga 1440  
 gggccggcct cactgttcca agggcacata gtcttgcgt tggtccactt gcaaggatcg 1500  
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<210> 59

<211> 499

<212> PRT

<213> *Medicago sativa*

<400> 59  
 Phe Leu His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg  
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 His Leu Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly  
 20 25 30  
 His Leu His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp  
 35 40 45  
 Leu Ser Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met  
 50 55 60  
 Pro Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln  
 65 70 75 80  
 Thr His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile  
 85 90 95  
 Arg Arg Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro  
 100 105 110  
 Tyr Trp Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala  
 115 120 125  
 Thr Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys  
 130 135 140  
 Leu Leu Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp  
 145 150 155 160  
 Leu Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met  
 165 170 175  
 Met Leu Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu  
 180 185 190  
 Lys Ile Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys  
 195 200 205  
 His Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn  
 210 215 220  
 Lys Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile  
 225 230 235 240  
 Val Arg Arg Arg Lys Asn Gly Glu Val Ile Glu Gly Glu Val Ser Gly  
 245 250 255  
 Val Phe Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Thr Glu  
 260 265 270  
 Ile Lys Ile Thr Lys Asp His Ile Lys Gly Leu Val Val Asp Phe Phe  
 275 280 285  
 Ser Ala Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala  
 290 295 300  
 Glu Leu Ile Asn Asn Pro Lys Val Leu Glu Lys Ala Arg Glu Glu Val  
 305 310 315 320  
 Tyr Ser Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln  
 325 330 335  
 Asn Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His  
 340 345 350

Pro Pro Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile  
355 360 365

Asn Gly Tyr Val Ile Pro Glu Gly Ala Leu Ile Leu Phe Asn Val Trp  
 370 375 380

Gln Val Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg  
 385 390 395 400

Pro Glu Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Arg Pro Leu  
405 410 415

Asp Leu Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg  
 420 425 430

Arg Met Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu  
435 440 445

Leu Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln  
450 455 460

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Ala Gly Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu  
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Ala Arg Ile

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<211> 1497

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gaacgaggca	acttccttca	acacaagg	ccaaacctca	gccataagac	gcctcaccta	300
tgatagtc	gtggccatgg	ttcccttccgg	accttactgg	aagttcgtga	ggaagctcat	360
catgaacgac	cttctcaacg	ccaccactgt	aaacaagg	aggccttga	ggacccaaca	420
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 Ser Lys Lys His Gly Pro Leu Phe Ser His Tyr Phe Gly Ser Met Pro  
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 Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr  
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 Arg Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro Tyr  
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 Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe  
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 Leu Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys  
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 Phe Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val  
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 Arg Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly Val  
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 Phe Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu Ile  
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 Lys Ile Thr Lys Asp His Thr Lys Gly Leu Val Val Asp Phe Phe Ser  
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 Ala Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu  
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 Ser Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn  
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Leu Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro  
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 Pro Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn  
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 Gly Tyr Val Ile Pro Glu Gly Ala Leu Ile Pro Phe Asn Val Trp Gln  
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 Leu Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg  
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 Met Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Thr Ala Thr Leu Leu  
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 Ala Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly  
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Pro Asn Pro Pro Ser Pro Xaa Pro Arg Leu Pro Phe Ile Gly His Xaa  
35 40 45

His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Xaa Ile Asp Leu Ser  
50 55 60

Lys Lys His Gly Pro Leu Phe Ser Xaa Xaa Phe Gly Ser Met Pro Thr  
65 70 75 80

Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Xaa Xaa  
85 90 95

Glu Ala Thr Ser Phe Xaa Thr Arg Phe Gln Thr Ser Ala Xaa Arg Xaa  
100 105 110

Leu Thr Tyr Asp Xaa Xaa Val Ala Xaa Xaa Pro Xaa Gly Pro Tyr Trp  
115 120 125

Xaa Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr  
130 135 140

Val Asn Xaa Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Xaa Leu  
145 150 155 160

Arg Xaa Met Ala Gln Xaa Ala Glu Ala Xaa Lys Pro Leu Asp Xaa Thr  
165 170 175

Glu Glu Leu Leu Lys Trp Xaa Asn Ser Thr Xaa Ser Met Met Xaa Leu  
180 185 190

Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile  
195 200 205

Xaa Gly Glu Tyr Ser Leu Thr Asp Phe Ile Xaa Pro Leu Lys Xaa Leu  
210 215 220

Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe  
225 230 235 240

Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Xaa Ile Val Arg  
245 250 255

Arg Arg Xaa Asn Gly Glu Xaa Xaa Glu Gly Glu Xaa Ser Gly Val Xaa  
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Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Xaa Glu Ile Lys  
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Ile Thr Lys Xaa Xaa Ile Lys Gly Leu Val Val Asp Xaa Phe Ser Ala  
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Gly Xaa Asp Ser Thr Ala Xaa Xaa Thr Glu Trp Ala Leu Ala Glu Leu  
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Ile Asn Asn Pro Xaa Val Leu Xaa Xaa Ala Arg Glu Glu Xaa Tyr Ser  
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Val Val Gly Lys Asp Xaa Leu Val Asp Glu Val Asp Thr Gln Asn Leu  
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Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro  
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Leu Pro Val Val Lys Arg Lys Cys Xaa Glu Glu Cys Xaa Ile Asn Gly  
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Xaa Val Xaa Pro Glu Gly Ala Leu Xaa Xaa Phe Asn Val Trp Gln Val  
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Gly Xaa Asp Xaa Lys Tyr Trp Asp Arg Pro Ser Glu Xaa Arg Pro Glu  
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Arg Phe Leu Glu Thr Xaa Ala Glu Gly Glu Ala Xaa Xaa Leu Asp Leu  
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Arg Gly Xaa His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Xaa Met  
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Ile Leu Lys Gly Xaa Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly  
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